

CLAIMS

1. A processor for use in a Voice over Internet Protocol (VoIP) telephone, comprising:
 - a bus;
 - 5 a processor core coupled to the bus;
 - a packet handler coupled to the bus, the packet handler including plurality of first ports for interfacing to one or more workstations;
 - a voice handler coupled to the bus, the voice handler including at least one second port for interfacing to a telephone;
 - 10 a cell/frame handler coupled to the bus, the cell frame handler adapted to couple to one or more packet networks; and
 - a peripheral control processor coupled to the bus for handling interrupts and DMA requests.
- 15 2. A processor according to claim 1, wherein the packet handler includes a bus bridge for interfacing to the bus, a 10/100bT interface, a wireless LAN interface, a Universal serial bus interface, and a home phonenumber alliance interface.
- 20 3. A processor according to claim 2, wherein the voice handler includes a bus bridge for interfacing to the bus, one or more PCM ports, a mailbox, and a DSP core.
4. A processor according to claim 3, wherein the cell/frame handler
25 includes a frame handler for sending and receiving frames over the one or more packet networks, an ATM handler for sending and receiving data over ATM networks, and an encryption unit for encrypting the data.
5. A method for providing a Voice over Internet Protocol (VoIP)
30 processor comprising:
 - providing a bus;
 - providing a processor core coupled to the bus;

providing a packet handler coupled to the bus, the packet handler including plurality of ports for interfacing to one or more workstations;

providing a voice handler coupled to the bus, the voice handler including at least one port for interfacing to a telephone;

5 providing a cell/frame handler coupled to the bus, the cell frame handler adapted to couple to one or more packet networks; and

providing a peripheral control processor coupled to the bus for handling interrupts and DMA requests;

10 6. A method according to claim 5, wherein providing the packet handler including providing a bus bridge for interfacing to the bus, a 10/100bT interface, a wireless LAN interface, a Universal serial bus interface, and a home
TELECOMMUNICATIONS ALLIANCE interface.

15 7. A method according to claim 6, wherein providing the voice handler including providing a bus interface for interfacing to the bus, one or more PCM ports, a mailbox, and a DSP core.

20 8. A method according to claim 7, wherein providing the cell/frame handler including providing a frame handler for sending and receiving frames over one or more packet networks, an ATM handler for sending and receiving data over ATM networks, and an encryption unit for encrypting the data.

25 9. A telecommunications system, comprising:
a local area network;
a workstation;
a telephone; and

30 a Voice over Internet Protocol interface coupling the telephone and the workstation to the local area network, the VoIP interface including a VoIP processor, the VoIP processor including

a bus,
a processor core coupled to the bus,

voice handler coupled to the bus, the voice handler including at least one port for interfacing to the telephone.

peripheral control processor coupled to the bus for handling interrupts and DMA requests.

11. A telecommunications system according to claim 10, wherein the voice handler includes a bus interface for interfacing to the bus, one or more PCM ports, a mailbox, and a DSP core.

13. A method of providing a telecommunications system, comprising:
providing a local area network;
providing a workstation;
providing a telephone; and

providing a Voice over Internet Protocol interface coupling the telephone and the workstation to the local area network, the VoIP interface including a VoIP processor, the VoIP processor including

- a bus,
- a processor core coupled to the bus.

a packet handler coupled to the bus, the packet handler including plurality of ports for interfacing to the workstation,

voice handler coupled to the bus, the voice handler including at least one port for interfacing to the telephone,

5 a cell/frame handler coupled to the network, the cell frame handler adapted to couple to the local area network, and

a peripheral control processor coupled to the bus for handling interrupts and DMA requests.

10 14. A telecommunications method according to claim 13, wherein providing the packet handler including providing a bus bridge for interfacing to the bus, a 10/100bT interface, a wireless LAN interface, a Universal serial bus interface, and a home phonline networking alliance interface.

15 15. A telecommunications method according to claim 14, wherein providing the voice handler includes providing a bus interface for interfacing to the bus, one or more PCM ports, a mailbox, and a DSP core.

20 16. A telecommunications method according to claim 15, wherein providing the cell/frame handler includes providing a frame handler for sending and receiving frames over one or more packet networks, an ATM handler for sending and receiving data over ATM networks; and an encryption unit for encrypting the data.